

Fig. 1

promoter and exon 1

ACTGCGGAGATGAGGGTCTAGAAGGTGGTGGCGGGGCAT
 GTGGACCGTTGTAAGGGCTCTGGGG**TTCTGGGTGGGCT**
 GGCGAAGTCCTACTCACAGTGACCAACCATGATGATGGT
 CCCGATAGAGGAGGAGAGGGAGGAGGAGGAAAAGGAAG
 GGTGAGGGGCTCAGAGGGGAGAGCTGGGAGGAGGGGAGA
 CATAGGTGGGGGAAGGGGTAGGAGAAAGGGGAAGGGAGC
 AAGAGGGTGAGGGGCACCAGGCCCCATAGACGTTTTGGC
 TCAGCGGCCACGAGG**CTTCATCAGCTCCCGCCGAAAAC**
 GGAAGCGAGGCCGTGGGGGCAGCGGCAGCATGGCGGGGC
 TTGTCTTGCGGCCATGGCCCCGCCCCCTGCCCGTCCGA
 TCAGCGCCCCGCCCGTCCCCGCCCCGACCCCGCCCCGG
 GCCCGCTCAGGCCCCGCC**CTGCCGCCGGAATCCTGAAG**
 CCCAAGGCTGCCCGGGGGCGGTCCGGCGGCGCCGGCGAT
 GGGGC**ATAAAA**CCACTGGCCACCTGCCGGGCTGCTCC

TGCGTGCGCTGCCGTCCCGGATCCACCGTGCCTCTGCGG
CCTGCGTGCCCGGAGTCCCCGCCTGTGTGCTCTGTGCG
CCGTCCCCGTCTCCTGCCAGGCGCGGAGCCCTGCGAGCC
GCGGGTGGGCCCCAGGCGCGCAG**ACATGGGCTGCTCCGC**
CAAAGCGCGCTGGGCTGCCGGGGCGCTGGGCGTCGCGGG
GCTACTGTGCGCTGTGCTGGGCGCTGTCATGATCGTGAT
GGTGCCGTCGCTCATCAAGCAGCAGGTCCTTAAG

A

GTGGGTGAGGGAGACCCAGGGGGTCCGCGCACGGACCC
 GGGCTGTTGGGCGCTGGGCGCCGGGAGGACCCGCGCGTT
 GCGGTGGGTGGGCGACCGCAGCGGAATCGGCGCCCGGGC
 CTGGCGCCCGAGAACACGAGGGAGGCCAGGCGCTTCGGG
 AGGGGCTGCTGCCCGCCTCCCCACCACCCTCACC

Fig. 2A

exon 2

AGCCTCATGTGCGAAGGGCTTTCCCACCACCTCCTATCC
 CAAGCTCCCGCCGAGGAGCCCCTTCCCTGGCCGGGCTCG
 GGCAGCTGTTCCGGAGCCTTGTGGTGGGGCGT**GGGGCC**
CTCATCACTCTCCTCACAAGCGTACTTGTCCCTTCCC
 CTGCAG

AACGTGCGCATCGACCCCAGTAGCCTGTCCTTCAACATG
TGGAAGGAGATCCCTATCCCCTTCTATCTCTCCGTCTAC
TTCTTTGACGTCATGAACCCCAGCGAGATCCTGAAGGGC
GAGAAGCCGCAGGTGCGGGAGCGCGGGCCCTACGTGTAC
AG

GTGAGGCTGTGTCCACGTGATGGTGGACGGGCCGGCTGA
 CGCTGGGCATGGGACGGGTCTCAN**AGTGGACGGGATG**
GGGAGGCTGCTGACTGACCCCCAAACATTGTTCCGGAA
 GCACGCAACTCATAGTCGGGGTAAGTGCTACTCCCAAAA
 AAGTTTGCGT

exon 3

CATGTCCTGCAGTGGGCAGGCAGCGGGAGGGACAGACTT
 GGCGAAGGGGCCGAGCTCAGCTTTGGCTGTGGGGCCGGA
 GGTGTGCACAGACGTCCAGGGCCCCTGGTTCCCAGGCAG
GCATTGCAGGCGAGTAGAAGGGAAACGTCCCATGCAG
 CGGGGCGGGGCGTCTGACCCACTGGCTTCCCCCACAG

GGAGTTCAGGCACAAAAGCAACATCACCTTCAACAACAA
CGACACCGTGTCTTTCCTcGAGTACCGCACCTTCCAGTT
CCAGCCCTCCAAGTCCCACGGCTCGGAGAGCGACTACAT
CGTCATGCCCAACATCCTGGTCTTG

A

GTGAGGCTGCCCTGTGGCCCACGCCGCCTCGCACCCCTGA
 CCTCGTCCCC**TGTCTCTCCTCCCGCCT**GCCCCCTTGTG
 CAGAGAGCAGTCCCTGAGGTGGTCGGAGCGTGGGGACTC
 ACGCCTGGTGGGTGGCTTTCGGCCCTGTGCTGTCTCCAC
 CACCCCA

Fig. 2B

exon 4

GGTGGTTCTGGTGTCCCAGATGCCCCACGTGGCCACTCC
 AGGGGCCTCCTGCACCCCAGCATTTCCCTTCAT**GGGCT**
CTTTGCTGTGAGGCCAGCTGGGGCCAAGGGAGGATG
 GGCCAGCCACGTCCAGCCTCTGACACTAGTGTCCCTTCG
 CCTTGCAG

GGTGCGGCGGTGATGATGGAGAATAAGCCCATGACCCTG
AAGCTCATCATGACCTTGGCATTACACCACCTCGGCGAA
CGTGCCTTCATGAACCGCACTGTGGGTGAGATCATGTGG
GGCTACAAGGACCCCTTGTGAATCTCATCAACAAGTACT
TTCCAGGCATGTTCCCCTTCAAGGACAAGTTCGGATTAT
TTGCTGAG

GTACGTGTGGCCTGGTGAGAAGCCAAAGATTCAAGGCCTG
 TGTCTGT**CTTCCCCTCACACAGCCTGG**ACACTGGTC
 ACCAGCTTGCTTTGTAGCTGGCTGGGGATCTAGTGGCTG
 TGGGTTGTAAGTGACTGAGAACCTGACTCAAACCGGCTT
 GAGTGAAA

exon 5

CCTCTCGGTCCCCAGACACTGGGCATTTGGCAGTGAACC
 AGATGCTGGGGGGCCCTGTCCTTCTGGTGGAGGGGGAGGA
 GGGCTCAG**CCCAGAATGTT**CAGACCAGGCCGGCTCAA
 TGGCAGGCCTAAGCCTTACGATGCTGTTCCCTGCTGTGT
 CTGTAG

CTCAACAACCTCCGACTCTGGGCTCTTCACGGTGTTCACG
GGGGTCCAGAACATCAGCAGGATCCACCTCGTGGACAAG
TGGAACGGGCTGAGCAAG

GTGAGGGGCGAGAGGCGAGGGCCCCTGTCGCCAGGGAGA
 GGGGAGGGTGGGCC**CGCC**ATGGCTGCTCGGGAGTGGCA
 GGGACCAGAGAGCTCCTTCTT**CCTTTGTCGTGAAGAG**
GGTGCTGGGAGGATGAACACTCTTGAAGTTGGAGGAGGG
 ATTTTA

T

Fig. 2C

exon 6

TCTCTGTGTGTCTACATAGCCTGCCCTCTTCCCACCGTG
 CCAGTATTGGGAATTGAGTGGCCGTGCGTGCACCAGGGT
 GAGTTAGGTGTGCAG**CACCTGAGAGGGCTTATTA**AGG
 GGCCTTGGCCCTACTGAGGGGTCTAGTCTGGATGCTTCC
 CCCAG

GTTGACTTCTGGCATTCCGATCAGTGCAACATGATCAAT
GGAACCTTCTGGGCAAATGTGGCCGCCCTTCATGACTCCT
GAGTCCTCGCTGGAGTTCTACAGCCCGGAGGCCTGCCG

GTAATCACTGGGACTCGGGGCCTCCTGGGTTTCCTGGGT
 AGCTCATGGCCAAATTCTGTGGTGTGGCTGT**GCACTT**
GGAAAGCATTTTGACTCATCGTGGATTGACTCAGTAG
 CCCTTGGCACCAGCTTGAATTCTCTTTGGTCACACCACC
 AAAAGC

exon 7

GGAGGTCGCTGCAGCTCCGCGGGTGAGAGATGGGGGCGG
 TTTGGACCCGGGAGGTGGTAGCGCCCGTGGGGAGAAGTG
 GCTGGATCTGGGCAGCCTTTGGCAGGGCCTGGCTCTGG**C**
CGCCGGGTCTGGGTGTCCCCTCTCATCCTGTCTGTCC
 CCTGCAG

ATCCATGAAGCTAATGTACAAGGAGTCAGGGGTGTTTGA
AGGCATCCCCACCTATCGCTTCGTGGCTCCCAAACCT
GTTTGCCAACGGGTCCATCTACCCACCCAACGAAGGCTT
CTGCCCCGTGCCTGGAGTCTGGAATTCAGAACGTCAGCAC
CTGCAGGTTCA

GTACGTGCCGTCCCCTGTTCTGGGATNGCCGGAGGGTGT
 TAGGTNTNGGGCACCTNANGGTTTATCTGCCCAATGCT**G**
TCTGCTTAATCTCTGGCCTCTGTACTCTTGATAACC
 CATTAAGCCAAAAATATGATGCCTCTGGGACGATATCTG

Fig. 2D

09779459.400101

exon 8

TGGGGCTTTT**TACAGAATGGAGGA**AGGGATCCTCTCT
 GTCGGGTATTATGGTCATCGCCACGGGGGTGCCGTGCAG
 ACCACAGCTCTGTGCAGACTTCCGGAGTGGCAGGACGTG
 CCAATATACTGTCGTTGTATGATGTCCCCTCCCTGCCCT
 TGTTGTAG

GTGCCCCCTTGTTTCTCTCCCATCCTCACTTCCTCAACG
CCGACCCGGTTCTGGCAGAAGCGGTGACTGGCCTGCACC
CTAACCAGGAGGCACACTCCTTGTTCCTGGACATCCACC
CG

T

GTGAGCCCCTGCCATCCTCTGTGGGGGGTGGGTGATTCC
 TGGTTGGAGCACACCTGGCTGCCTCCTCTCTCCCCAG
 GCAGAGAGCTGCTGTGGGCTGGGGTGGTGGGAAGCCTGG
 CTTCTAGAATCTCGAGCCACCAAAGTTCCTTACT

exon 9

CCCCAGCCTGTGGCTTGTTT**TAGGTAAGATA**CAAGCAAG
 CTCCACTGGGCAGTTAGCTGGGACGCCACCCTCTTGAC
 TGGGACCAGGGAAA**AGAAGGTGACTGTGTCCCTGGA**
GCTTGGGGGTGGCCAGTCTCCTCACTGTGTTTGTTGCCG
 CAG

GTCACGGGAATCCCCATGAACTGCTCTGTGAAACTGCAG
CTGAGCCTCTACATGAAATCTGTGCGCAGGCATTGG

GTGAGTGGGGACTGGGAACTGGGGCTGCATTGCTCATTG
 AGAGATTANGT**GCTCAGTGCTCCAGTGTTCC**CAGAC
 TCCCCTGACATACCCAGGAAACAGGGCATGGGGAAGGG
 AGAGGGTCCTATTGGGGGTGGAATCCAGTCCCTGCTGAT
 CTTCTC

Fig. 2E

09779452.100101

exon 10

ATGGCTCCTAAAGTGTTTCAGCTCATTGTTTATATTTGG
TGGTGAGGGTTTAGTGTGTGCAAAATTATACTAAACC
 TGTTTAGATGTTGTATTCAAGCAGAATTAGATCAAGTTT
 GGGTGTAAGACTTTGTTCCAACACCTATGTCTTGCTTAT
 TTCCAG

ACAAACTGGGAAGATTGAGCCTGTGGTCCTGCCGCTGCT
CTGGTTTGACAGAG

GTAAGGGTGCGTTGGGCACAGCGTCGGGGGCTTTTGTTA
 ATAGCCAATGTGGGCATTT**GAGGCAGGAGGCGGGGGG**
AGCACCTTGTAGAAAGGGAGAGGGCTGAGCCAGGGTAAC
 CGGACTGTTACATGGACCAGCGTATCATACTTCACCC
 TGTC

exon 11

CCTGGAGGGAGGAGGTCCCTGGCAGGCTCCAACACATGC
 TTTAGCCGGGAAGCTTGAGGTGGGGAAAAGCTGAGGCGG
 GCACAGAGG**AAGGTGTTGGGTGGCATCTG**CGCTGTAG
 CCCGCAGC**CT**GGCGCCCCAGCTCATGTGTTTGTCATTCT **G**
 GTCTCCTCAG

AGCGGGGCCATGGAGGGGGAGACTCTTCACACATTCTAC
ACTCAGCTGGTGTTGATGCCCAAGGTGATGCACTATGCC
CAGTACGTCCTCCTGGCGCTGGGCTGCGTCCTGCTGCTG
GTCCCTGTCATCTGCCAAATCCGGAGCCAA

GTAGGTGCTGGCCAGAGGGCAGCCCGGGCTGACAGCCAT
 TCGCTTGCCCTGCTGGGGGAAAGGGGCCTCAGATCGGACC
 CTCT**GGCCAACCGCAGCCTGGAGCCC**ACCTCCAGCAG
 CAGTCCTGCGTCTCTGCCGGAGTGGGAGCGGTCACTGCT
 GGGGG

Fig. 2F

exon 12

CCCCACATCTCAGCCACCTGCAATCGTTGAGGGTTGTTG
GACTCTAAACTTATGTGCCTTTCCTGTTTCCTCTTTGCC
TTTTGCAAA**TTGAAGAACCGTGTA**AAACCATTTTTAT
GTGGCTTCAACGTCAACTATAAATTAGCTTGGTTATCTT
CTAG

GAGAAATGCTATTTATTTTGGAGTAGTAGTAAAAAGGGC
TCAAAGGATAAGGAGGCCATTCAGGCCTATTCTGAATCC
CTGATGACATCAGCTCCCAAGGGCTCTGTGCTGCAGGAA
GCAAAACTGTAG

GTGGGTACCAGGTAATGCCGTGCGCCTCCCCGCCCCCTC
CCATATCAAGTAGAATGCTGGCGGCTTAAACATTTGGG
GTCCTGCT**TCATTCCTTCAGCCTCA**ACTTCACCTGGAG
TGTCTACAGACTGAAGATGCATATTTGTGTATTTTGCTT
TTGGAGAAA

Fig. 2G

0979152.100101

[illegible]

Fig. 3A-1

F M N N R T V G E I M W G Y K D P L V N L 190
 TTC ATG AAC CGC ACT GTG GGT GAG ATC ATG TGG GGC TAC AAG GAC CCC CTT GTG AAT CTC 688
 I N K Y F P G M F P F K D K F G L F A E 210
 ATC AAC AAG TAC TTT CCA GGC ATG TTC CCC TTC AAG GAC AAG TTC GGA TTA TTT GCT GAG 748
 L N N S D S G L F T V F T G V Q N I S R 230
 CTC AAC AAC TCC GAC TCT GGC CTC TTC ACG GTG TTC ACG GGG GTC CAG AAC ATC AGC AGG 808
 I H L V D K W N G L S K V D F W H S D Q 250
 ATC CAC CTC GTG GAC AAG TGG AAC GGC CTG AGC AAG GTT GAC TTC TGG CAT TCC GAT CAG 868
 C N M I N G T S G Q M W P P F M T P E S 270
 TGC AAC ATG ATC AAT GGA ACT TCT GGC CAA ATG TGG CCG CCC TTC ATG ACT CCT GAG TCC 928
 S L E F Y S P E A C R S M K L M Y K E S 290
 TCG CTG GAG TTC TAC AGC CCG GAG GCC TGC CGA TCC ATG AAG CTA ATG TAC AAG GAG TCA 988
 G V F E G I P T Y R F V A P K T L F A N 310
 GGG GTG TTT GAA GGC ATC CCC ACC TAT CGC TTC GTG GCT CCC AAA ACC CTG TTT GOC AAC 1048
 G S I Y P P N E G F C P C L E S G I Q N 330
 GGG TCC ATC TAC CCA CCC AAC GAA GGC TTC TGC CCG TGC CTG GAG TCT GGA ATT CAG AAC 1108
 V S T C R F S A P L F L S H P H F L N A 350
 GTC AGC ACC TGC AGG TTC AGT GCC CCC TTG TTT CTC TCC CAT CCT CAC TTC CTC AAC GGC 1168
 D P V L A E A V T G L H P N Q E A H S L 370
 GAC CCG GTT CTG GCA GAA GOG GTG ACT OOC CTG CAC OCT AAC CAG GAG GCA CAC TCC TTG 12281

Fig. 3A-2

F L D I H P V T G I P M N C S V K L Q L 390
 TTC CTG GAC ATC CAC CCG GTC ACG GGA ATC CCC ATG AAC TGC TCT GTG AAA CTG CAG CTG 1288
 S L Y M K S V A G I G Q T G K I E P V 410
 AGC CTC TAC ATG AAA TCT GTC GCA GGC ATT GGA CAA ACT GGG AAG ATT GAG CCT GTG GTC 1348
 L P L L W P A E S G A M E G E T L M T F 430
 CTG CCG CTG CTC TGG TTT GCA GAG AGC GGG GCC ATG GAG GGG GAG ACT CTT CAC ACA TTC 1408
 Y T Q L V L M P K V M H Y A Q Y V L L A 450
 TAC ACT CAG CTG GTG TTG ATG CCC AAG GTG ATG CAC TAT GCC CAG TAC GTC CTC CTG GCG 1468
 L G C V L L L V P V I C Q I R S Q E K C 470
 CTG GGC TGC GTC CTG CTG GTC CCT GTC ATC TGC CAA ATC CGG AGC CAA GAG AAA TGC 1528
 Y L F W S S K K G G G C A A G GGC TCA AAG GAT AAG GAG GCC ATT CAG GCC TAT 1588
 TAT TTA TTT TGG AGT AGT AAA AAG GGC TCA AAG GGC TCT GTG CTG CAG GAA GCA AAA CTG TAG 1648
 S E S L M T S A P K G S V L Q E A K L * 510
 TCT GAA TCC CTG ATG ACA TCA GCT CCC AAG GGC TCT GTG CTG CAG GAA GCA AAA CTG TAG 1648
 GCTCCTGAGGACACCGTGAGCCAGCCCTGGCCCTGACCGGCCCCAGCCCCCTACACCCGCTTCTCC 1727
 CGGACTCTCCAGACAGCCCCCAGCCCCACAGCCTGAGCCTCCAGCTGCCATGTCCCTGTGCACACCTGCACA 1806
 CAGGCCCTGGCACATACACATGCGTGCAGGCTTGTGCAGACACTCAGGGATGGAGCTGCTGCTGAAGGACTTGT 1885

Fig. 3B-1

1964
 AGGAGAGGCTCGTCAACCACTGTCTGTGAACCTTCTCTCCACGTGGCCACAGGCTGACCACAGGGGCTGTGGG
 2043
 TCCCTGGTCCCCCTTCCCTCGGTGAGCCTGGCCCTGTCCCGTTACGCCGTTGGGCCACAGGCTTCTCCCTCCAACGTGAA
 2122
 ACACTGCAGTCCCGGTGTGGTGGCTCCCCATGCAGGACGGGCCAGGCTGGGAGTGCCGCCCTTCCCTGTGCCAAATTCACT
 2201
 GGGACTCAGTGCCCAAGGCCCTGGCCACGAGCTTTGGCCCTTGGTCTACCTGCCAGGCCAGGCAAGCGCCCTTTACACAG
 2280
 GCCTCGGAAAAACAATGGAGTGAGCACAAAGATGCCCTGTGCAGCTGCCCGAGGGTCTCCGCCCAACCCCGCGGACTTTG
 2359
 ATCCCCCGAAGTCTTACAGGCACCTCCATCGGGTTGTCTGGCGCCCTTTCTCCAGCCCTAAACTGACATCATCCTAT
 2438
 GGAAGTGGCCGCACTTCTTGGCCGAAAGTGGCCGCAAGCTGTGCCCGAGCTGCCCGGCTCCCTGGAACCTGGGCAACC
 2517
 CAGATTATAGGTGCCCAAGCTGAGGTGAAGGCCCTGGGGCCCTGCCCTTCCGGCCGCTCCTGGACCTGGGGCAACC
 2596
 TGTGACCCCTTTCTACTGGAAATAGAAATGAGTTTATCATCTTTGAAAAATAATTCACTCTTGAAGTAATAACGTTTA
 2630
 AAAAAATGGGAAAAAATAAAAAA

Fig. 3B-2

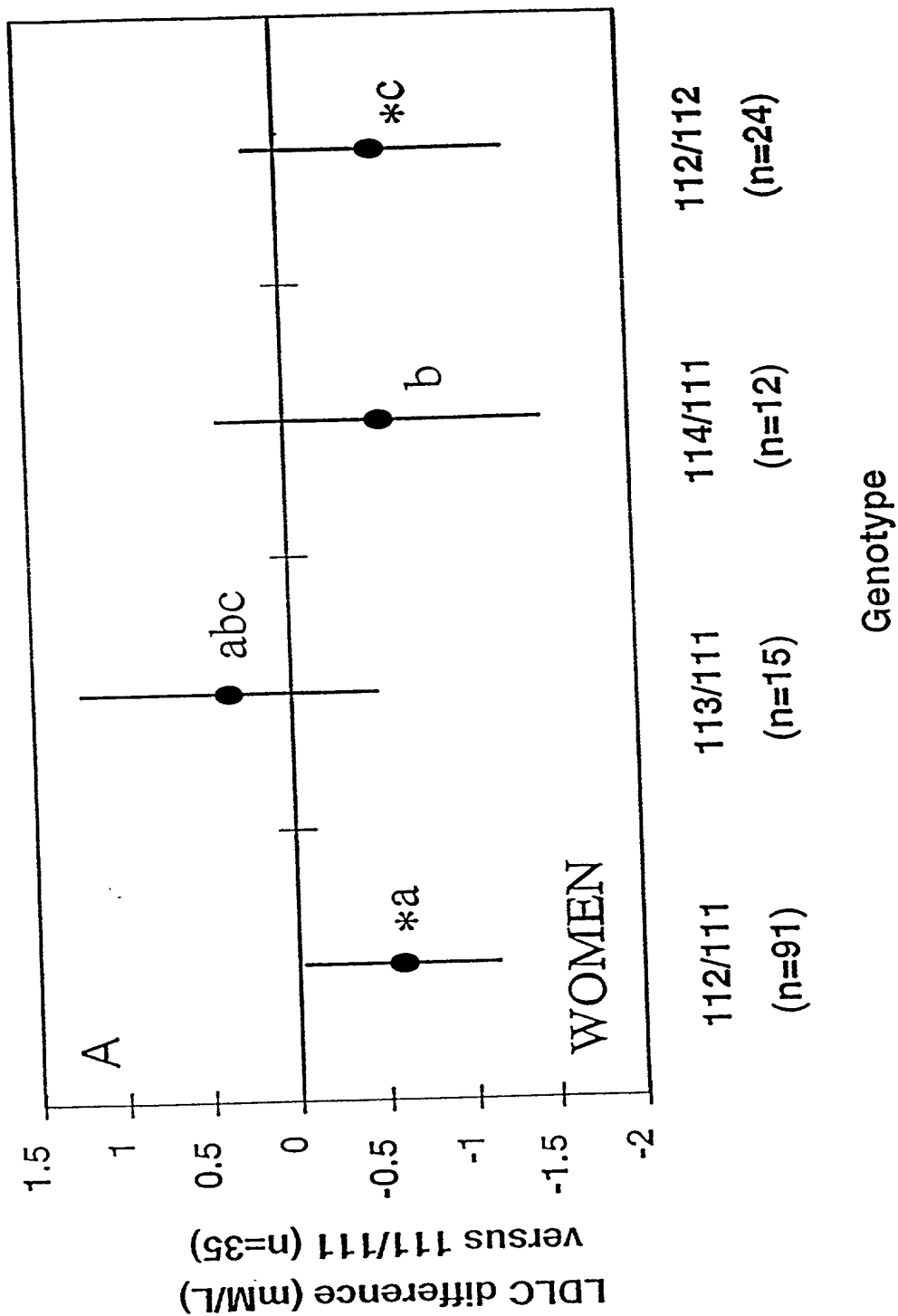


Fig. 4

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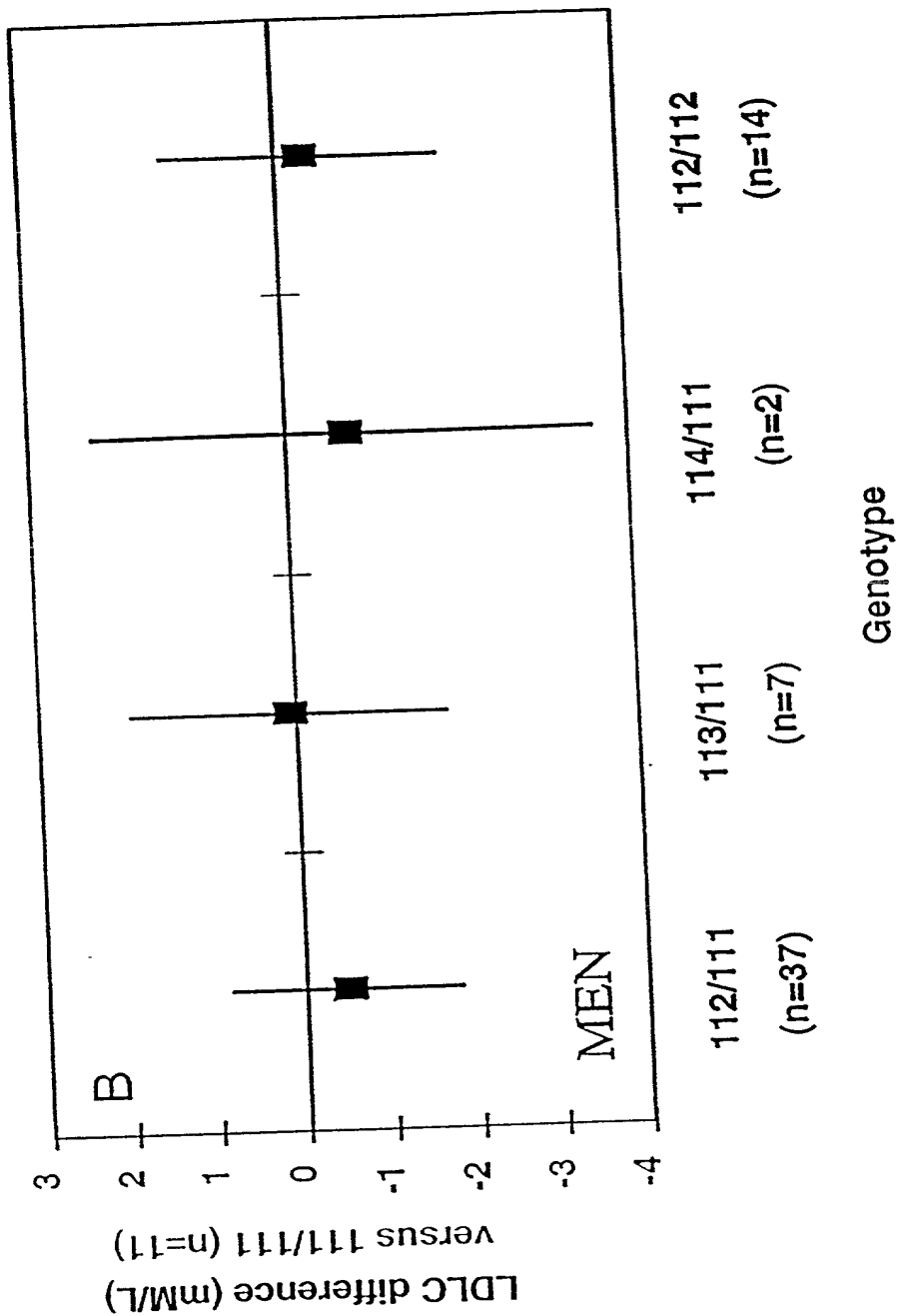


Fig. 5

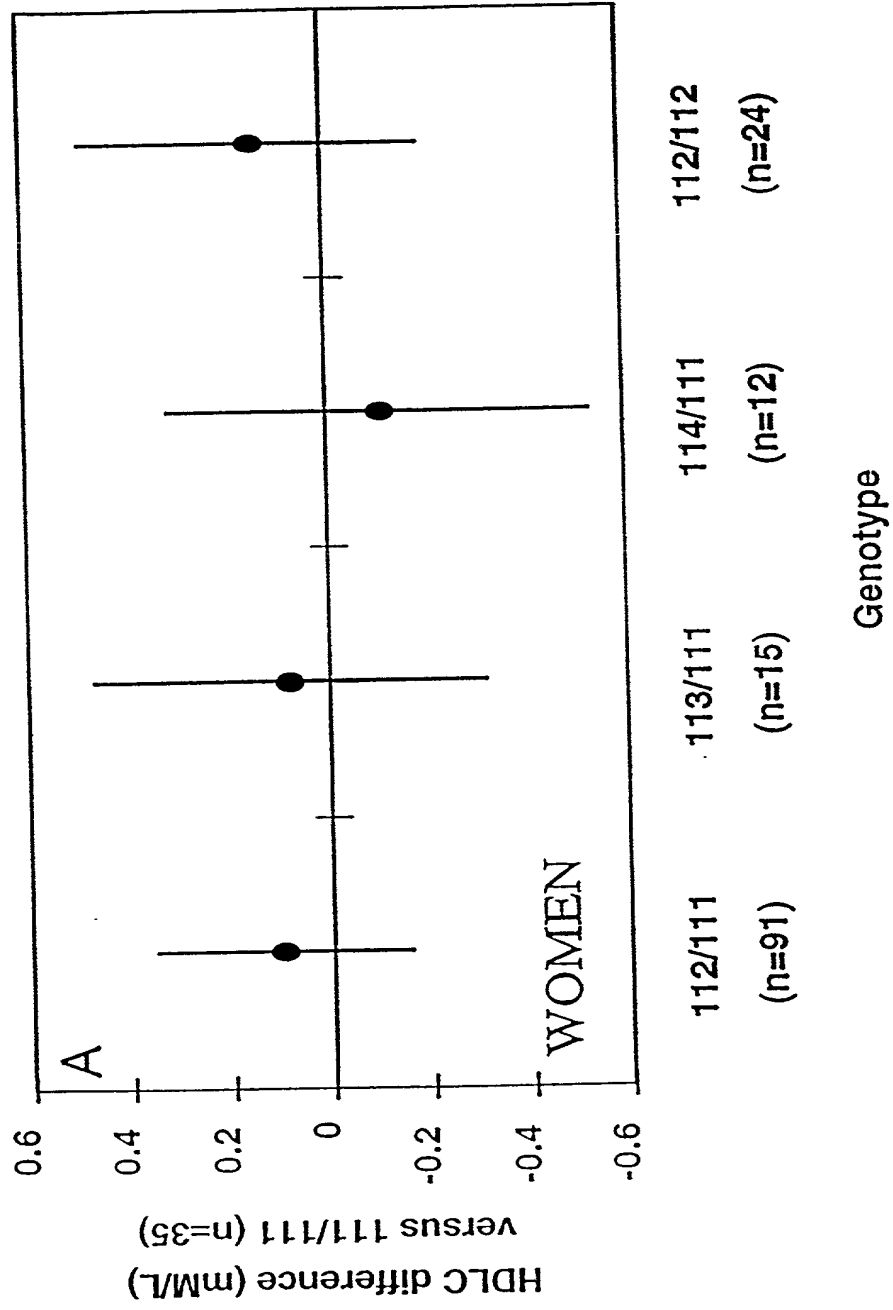


Fig. 6

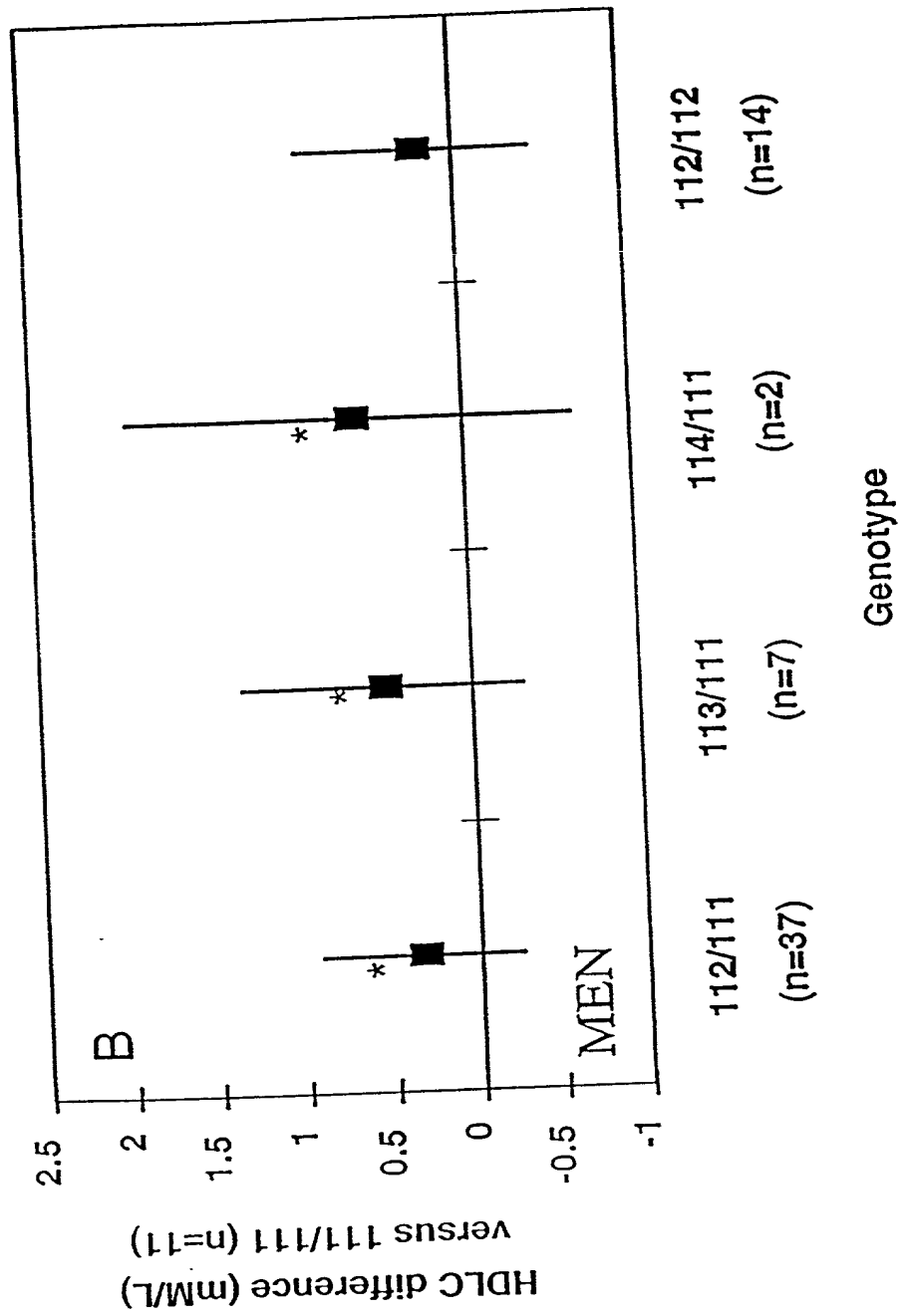


Fig. 7

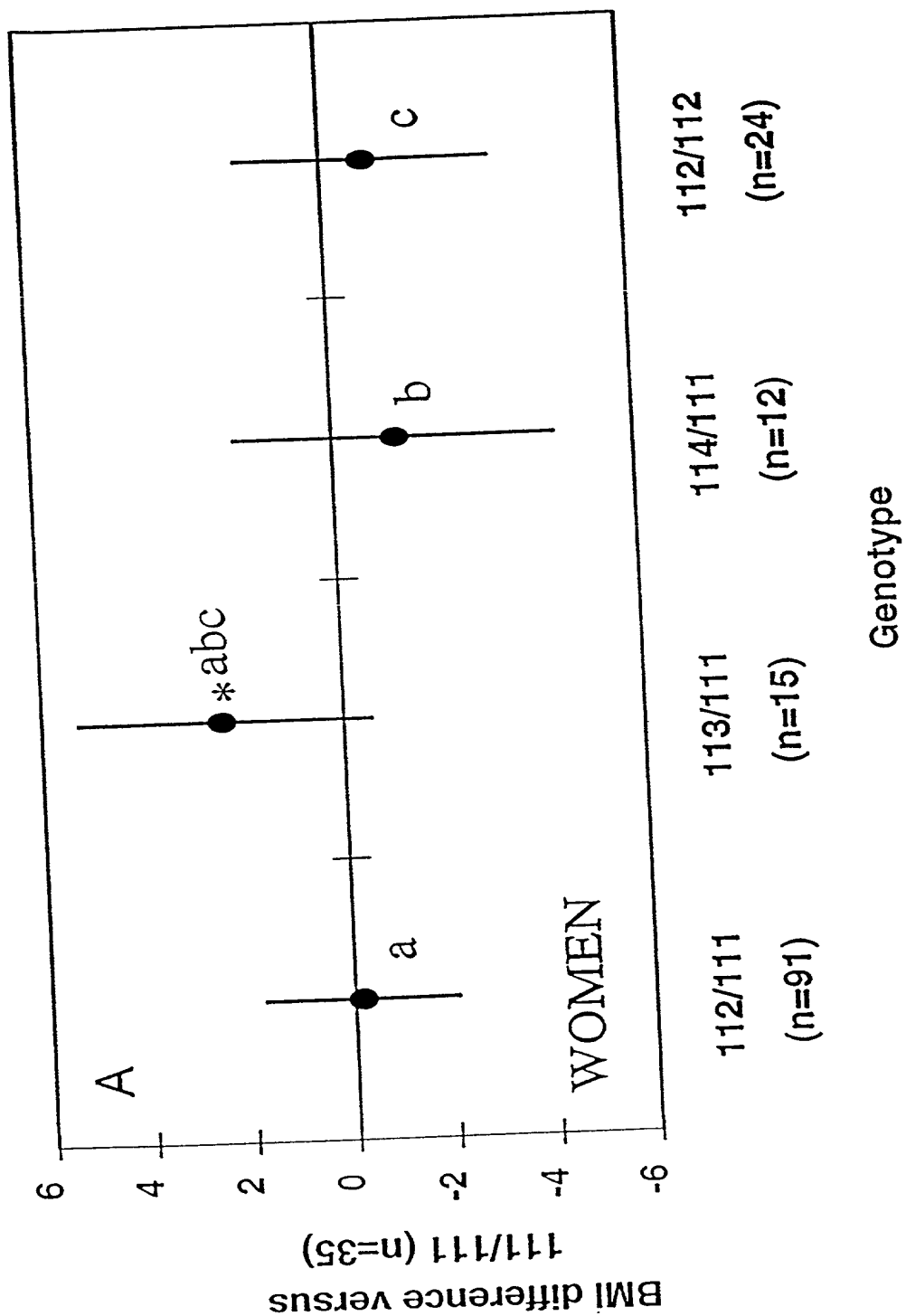


Fig. 8

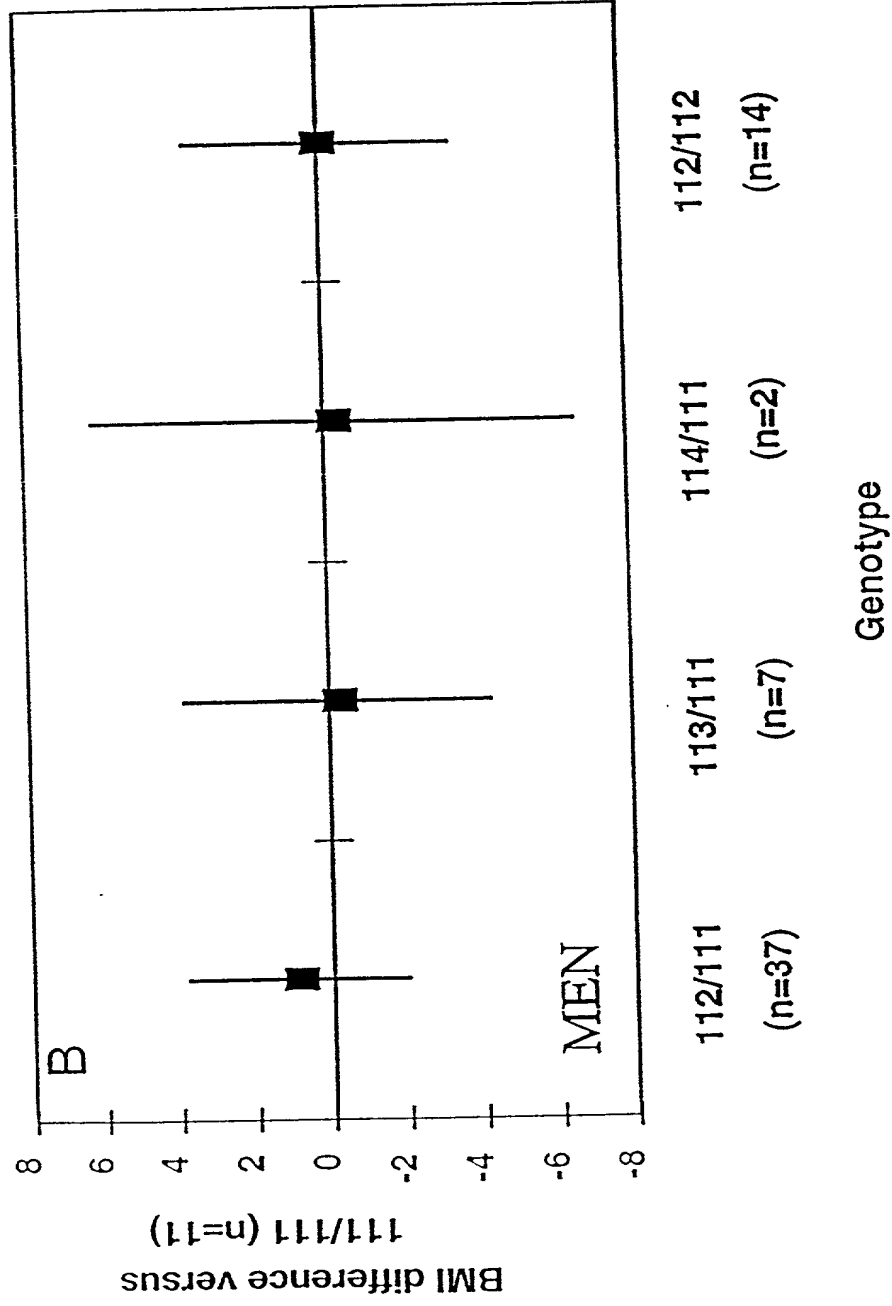


Fig. 9